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- 06-71000-15

8. The method of Claim 1 wherein the density of the microarray on the surface is at least 1000 spots per square centimeter.

9. The method of Claim 1 wherein the mixture of synthetic oligonucleotides comprises ten different oligonucleotide sequences.

10. The method of Claim 1 wherein the synthetic oligonucleotides are between about 10 and about 30 nucleotides in length.

11. The method of Claim 1 wherein the genomic segments each comprise between about 40 and about 1000 base pairs.

12. The method of Claim 1 wherein hybridizing is performed in an aqueous solutions comprising salts and detergent.

13. The method of Claim 1 wherein hybridizing is performed at a temperature about 10 °C below the melting temperature of the synthetic oligonucleotides.

14. The method of Claim 1 wherein the synthetic oligonucleotides comprise fluorescent labels.

15. The method of Claim 1 wherein the synthetic oligonucleotides comprise non-fluorescent labels.

16. The method of Claim 1 wherein the genotyping information distinguishes samples from homozygotes and samples from heterozygotes at a specific genetic locus.

17. The method of Claim 14 wherein the signals are generated by fluorescence emission from the labeled oligonucleotides.

18. The method of Claim 14 wherein the signals are generated by fluorescence emission at more than one wavelength of light.

19. The method of Claim 15 wherein the signals are generated by fluorescence emission after antibody staining.

20. The method of Claim 15 wherein the signals are generated by fluorescence emission at more than one wavelength of light after antibody staining.

21. The method of Claim 1 wherein the surface comprises glass.

22. The method of Claim 1 wherein the amplified genomic segments comprise amino linkers.

23. The method of Claim 22 wherein the surface comprises reactive aldehyde groups.

24. The method of Claim 1 wherein the microarray is formed by mechanical micro-spotting.

add
a5

add
B1

Add C11

Add C5

Add D3